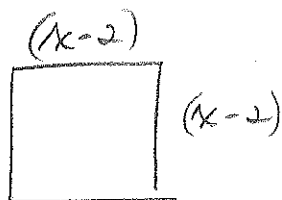


p31 5 Review Solutions

WRITE FORMULA!

24



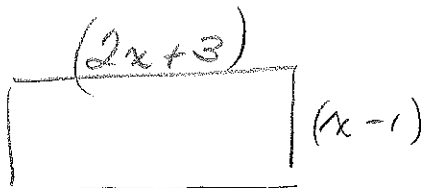
$$A = l * w$$

$$A = (x-2)(x-2)$$

$$= x^2 - 2x - 2x + 4$$

$$A = x^2 - 4x + 4 \text{ units}^2$$

25



$$A = l * w$$

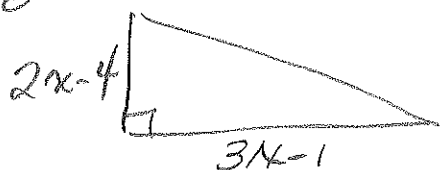
$$A = (2x+3)(x-1)$$

$$A = 2x^2 - 2x + 3x - 3$$

$$A = 2x^2 + x - 3 \text{ units}^2$$

WRITE FORMULA!

26



$$A = \frac{1}{2}bh$$

$$A = \frac{1}{2}(3x-1)(2x-4)$$

$$A = \frac{1}{2}(6x^2 - 12x - 2x + 4)$$

$$A = \frac{1}{2}(6x^2 - 14x + 4)$$

$$A = 3x^2 - 7x + 2 \text{ units}^2$$

27 Let $P = \text{total Population}$.

$$P = M + F$$

$$P = (-0.01098t^4 + 0.1284t^3 - 0.23t^2 + 1.11t + 128.4) + (-0.00877t^4 + 0.025t^3 - 0.202t^2 + 1.16t + 134.6)$$

$$P = -0.01975t^4 + 0.2309t^3 - 0.44t^2 + 2.27t + 263$$

P31 (contd)

#19

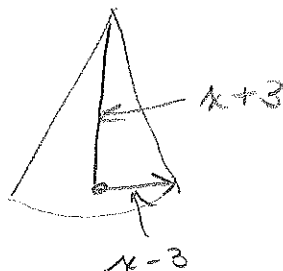


$$V = l \times w \times h$$

$$V = (x+6)(x)(2x+1)$$

$$V = 2x^3 + 13x^2 + 6x \text{ units}^3$$

#20



$$V = \frac{1}{3} \pi r^2 h$$

$$= \frac{1}{3} \pi (x-3)^2 (x+3)$$

$$= \frac{1}{3} \pi (x^2 - 6x + 9)(x+3)$$

$$= \frac{1}{3} \pi (x^3 + 3x^2 - 6x^2 - 18x + 9x + 27)$$

$$= \frac{1}{3} \pi (x^3 - 3x^2 - 9x + 27)$$

$$V = \frac{1}{3} \pi x^3 - \pi x^2 - 3\pi x + 9\pi \text{ units}^3$$

#21 C = total consumption

$$C = B \times P$$

$$\text{gallons} = \frac{B \text{ gallons}}{\text{person}} \times \overset{P}{\# \text{ people}}$$

$$C = (0.0977t^2 + 0.186t + 7.86)(3226t + 250,359)$$

$$C = 315t^3 + 25060t^2 + 71923t + 1,967,882$$

in 1998 $t = 1$

$$C(1) \approx 4,308,326$$

#20 a) $A = -0.089t^5 - 2.19t^4 + 35.35t^3 - 151.8t^2 + 280t + 1904$

b) because P is a percent it must be a decimal value in an equation so $\div 100$

c) ≈ 2133